REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-3, 7-10, 13-15, 19-22, 24-26, 30, and 34 are currently being amended.

This amendment adds, changes and/or deletes claims in this application. Support for amended claims 1-3, 7-10, 13-15, 19-22, 24-26, 30, and 34 can be found through the specification as originally filed and at least on page 6, lines 23-25; page 7, lines 22-24; and in Figures 2A through 2C, Figures 3B through 3D, and Figures 6A and 6B. The present amendment does not add new matter. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-30 and 32-48 are now pending in this application, of which claims 1-30 and 32-38 are currently under consideration.

Rejections Under 35 U.S.C. §102

A. U.S. Patent No. 3,675,846 to Drucker

Claims 1-6, 11, 13-18, 24-29 and 34 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,675,846 to Drucker. Applicants respectfully submit that claims 1-6, 11, 13-18, 24-29 and 34 as amended herein are not anticipated by Drucker.

Applicants have amended each of independent claims 1, 13, 24, and 34 to recite additional limitations directed to the circular enclosure including: (i) "a first mating portion positioned adjacent to the central opening along the interior surface of at least one of the first and second sides"; (ii) that first mating portion "extends in a direction perpendicular to the interior surface"; and (iii) that the first mating portion is "integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of the hub."

Turning briefly to Drucker, a continuous-flow centrifuge head is described including a plastic bag that rotates with the chamber serving a s a liner for the chamber (Col. 2, lines 56-57). In particular, "the plastic bag is suspended around the neck 55a on the central bracket." As further described by Drucker, the bag may be supported by cords around its neck and around the neck 55a of the bracket, or by an O-ring in the upper annular groove 55b. (Col. 2, lines 52-60). Thus, an open end of a plastic bag is positioned against the neck 55a of the central bracket and held into place using cords. As illustrated in FIG. 3 of Drucker, the plastic bag may follow the interior contour of the chamber, including a portion positioned within the upper annular groove 55b, described as being held in place by an O-ring.

Nowhere does Drucker describe or even suggest a first mating portion "integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of the hub" as recited in Applicants' amended claims. Rather, Drucker describes a plastic bag that is held in place by cords or an O-ring. As shown in FIG. 3 of Drucker, the bag is positioned partly into the upper annular groove 55b and described as being held into place by "an O-ring in the upper annular groove." (Col 2, lines 58-60). There is nothing in Drucker to suggest that the bag, its opening, or any area adjacent to its opening is integrally formed into any particular shape. A "plastic bag," as such, may be twisted and contorted into almost any conceivable shape. For example, a portion of the plastic bag can be forced into the upper annular groove using an O-ring as described. Such manipulation of the plastic bag alone, however, is not equivalent to a bag being integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of the hub.

A first mating portion that is "integrally formed for mating" as recited in Applicants' claims does not require that the first mating portion actually be mated with anything. Rather, the bag has an integral form that is chosen to mate with a corresponding second mating portion of the hub. If the bag is removed from the hub, or inspected without reference to the hub, the bag still includes a first mating portion that is integrally formed for mating with the hub. In an illustrative embodiment shown in FIG. 2A through 2C, and described in page 7, lines 16-18, of the

application, Applicants' bag includes a first mating section (a raised portion including a half-circle cross section, which may act as a built in O-ring). The raised portion is present whether the bag is mounted to or un-mounted from a hub. There is nothing in Drucker to suggest that the bag illustrated in FIG. 3 will retain the shape absent the bracket.

Thus, Applicants submit that all of the recited elements in independent claim 1 as amended herein are not found in Drucker, at least because Drucker fails to disclose a bag having a first mating portion that is "integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of the hub." Applicants respectfully request withdrawal of the rejection of independent claim 1.

Independent claims 13, 24, and 34 have also been amended to recite similar limitations as claim 1 and are therefore not anticipated by Drucker for at least the same reasons as claim 1.

Dependent claims 2-6 and 11 depend directly or indirectly from amended claim 1, dependent claims 14-18 depend directly or indirectly from amended claim 13, and dependent claims, and 25-29 depend directly or indirectly from amended claim 24. Accordingly, each of dependent claims 2-6, 11, 14-18, and 25-29 contain all the elements of their respective independent claims and are not anticipated by Drucker for at least the same reasons. Additionally, dependent claims 2-3, 14-15, and 25-26 have also been amended to recite additional limitations thereby further distinguishing them from Drucker. Applicants respectfully request withdrawal of the rejection of claims 2-6, 11, 14-18, and 25-29.

B. U.S. Patent No. 4,610,369 to Mercier

Claims 1-23 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,610,369 to Mercier. Applicants respectfully submit that claims 1-23 as amended herein are not anticipated by Mercier.

Briefly, Mercier describes a pressure vessel including a rigid container having a deformable partition therein and a plurality of closure elements normally extending radially

outward. (Abstract). The pressure vessel includes a pair of ports for charging and discharging the vessel with fluids. A chamber "C" is defined between the rigid container and the deformable partition for storing a fluid. The fluid can be ejected from the chamber by forcing air into the deformable partition. Air enters the deformable partition through the bellows.

The Office Action at the bottom of page 3 equates Applicants' bag to the bellows described by Mercier. Each of Applicants' independent claims 1 and 13 as amended herein now recites that the bag "is a substantially circular enclosure including a first side and a second side radially connected to the first side along an outer edge." The bellows structure described by Mercier is completely different from the circular enclosure recited in Applicants' amended claims.

Thus, Applicants submit that all of the recited elements in independent claims 1 and 13 as amended herein are not found in Mercier, at least because Mercier fails to disclose a bag that is "a substantially circular enclosure including a first side and a second side radially connected to the first side along an outer edge." Applicants respectfully request withdrawal of the rejection of independent claims 1 and 13.

Dependent claims 2-12 depend directly or indirectly from independent claim 1. Dependent claims 14-23 depend directly or indirectly from independent claim 13. Accordingly, each of dependent claims 2-12 and 14-23 contain all the elements of their respective independent claims and are not anticipated by Mercier for at least the same reasons. Additionally, dependent claims 2-3, 14-15, and 25-26 have also been amended to recite additional limitations thereby further distinguishing them from Mercier. Applicants respectfully request withdrawal of the rejection of claims 2-12 and 14-23.

C. U.S. Patent Application Publication No. 2002/0107131 to Jorgensen *et al.*

Claims 1-29 and 34 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0107131 to Jorgensen *et al.* (Jorgensen *et al.*).

Applicants respectfully submit that claims 1-29 and 34 as amended herein are not anticipated by Jorgensen *et al.*

As an initial matter, at least one of the Applicants in the present case is also a joint inventor of the Jorgensen *et al.* application. Applicants note that the present invention represents an improvement over the disclosure of Jorgensen *et al.* at least in that Applicants' present invention includes a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub and extending in a direction perpendicular to the interior surface. Contrary to Examiner's assertion, Jorgensen *et al.* fails to disclose, teach or suggest that the bag includes either an integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub or that the first mating portion extends in a direction perpendicular to the interior surface, as recited in Applicants' claims.

Prior art centrifuge processing bags, such as those described in U.S. Patent Application Publication No. 2002/0107131 to Jorgensen *et al.* do not include a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub, nor does the first mating portion extend in a direction perpendicular to the interior surface. As a result, the prior art bags are susceptible to slippage a the joint between the bag and the hub. The centrifugal forces experienced by the fluid-filled bag pull the prior art bags away from the hub. Without a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub and extending in a direction perpendicular to the interior surface, the prior art bags are prone to slippage at the joint to the hub. Beneficially, Applicants' first mating portion being integrally formed for mating and extending in a direction perpendicular to the interior surface provides a more reliable technique for joining a centrifuge processing bag to a central hub.

The Office Action a the bottom of page 4 mischaracterizes the Jorgensen *et al.* reference as including a first mating portion comprising one or more recesses formed adjacent to the opening, and again as including a first mating portion comprising one or more raised areas formed adjacent the openings. The Office Action relies especially on FIG. 1. The Office Action also relies on FIG. 1 for illustrating a gab comprising at least one weld ring.

To the contrary, Jorgensen et al. provides no such support for a bag having a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of the hub and extending in a direction perpendicular to the interior surface of the bag. FIG. 1 does show a substantially circular enclosure including a first side and a second side radially connected to the first side along an outer edge, the first and second sides defining an interior surface therebetween, at least one of the first and second sides having a central opening for housing a central hub.

Perhaps the Office Action misinterprets annular lines drawn about the central opening. There is no description of these lines as relating to any such first mating portion integrally formed for mating or extending in a direction perpendicular to the interior surface. Diagrams of the processor bag mounted on a hub are provided in FIG. 3 and FIG. 7 of Jorgensen et al.. Applicants note that these figures do not illustrate any first mating portion integrally formed for mating and extending in a direction perpendicular to the interior surface is observable. Rather, the portion of the bag adjacent to the axial opening and the hub appears to be positioned in a flat but joint against an adjacent surface of the hub.

In comparison, an exemplary embodiment of Applicants' invention illustrated in FIG. 2C plainly shows a first mating portion in the form of a half-round O-ring integrally formed to the bag extends in a direction perpendicular to the interior surface. The first mating portion of FIG. 2C is integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub shown in FIG. 3B. As further illustrated in Applicants' FIG. 6A and 6B, the first mating portion of the bag protrudes from the interior surface for extending into the recess of the adjoining hub when so joined (in the vicinity of reference 612a).

Thus, Applicants submit that all of the recited elements in claims 1-29 and 34 as amended herein are not found in Jorgensen *et al.*, at least because Jorgensen *et al.* fails to disclose a bag that includes "a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub" and the first mating portion "extending in a direction perpendicular to the interior surface." Applicants respectfully request withdrawal of the rejection of claims 1-29 and 34.

Rejections Under 35 U.S.C. § 103

A. U.S. Patent Application Publication No. 2002/0107131 to Jorgensen *et al.*

U.S. Patent Application Publication No. 2002/0107131 to Jorgensen *et al.* claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen *et al.* The Examiner asserts that Jorgensen *et al.* teaches by implication, a process of welding a bag to a weld ring through solvents or heat. Assuming *agruendo* that it does, Jorgensen *et al.* still does not teach or suggest a bag having a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub as recited in amended claim 34 from which claims 35-38 depend directly or indirectly. Since the first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub is part of the bag being welded to the second mating portion on the hub, Jorgensen *et al.* can't be read as disclosing the claimed method of sealing a centrifuge bag to the hub. Accordingly, Jorgensen itself cannot be used to establish prima facie obviousness against the claimed invention. Applicants respectfully request withdrawal of the rejection of claims 35-38.

B. Jorgensen *et al.* in view of U.S. Patent No. 3,982,691 to Schlutz

Claims 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen *et al.* in view of U.S. Patent No. US 3,982,691 to Schlutz (Schlutz). Applicants respectfully submit that claims 30, 32 and 33 as amended herein are not obvious over Jorgensen *et al.* in view of Schlutz at least because the references when combined fail to disclose, teach, or suggest all of the elements of the claims.

Independent claim 30 as amended herein recites "a first mating portion integrally formed for mating in a cooperative arrangement with a corresponding second mating portion of a hub." As argued above, Jorgensen *et al.* fails to disclose, teach, or suggest at least this limitation. The Examiner characterizes Schlutz as teaching the use of adhesives to join the centrifuge bag components, but it does not offer Schlutz with respect to any particular distinctive elements of the centrifuge bag component itself. Thus, Schlutz does not cure the deficiencies of Jorgensen *et al.*, which does not itself disclose Applicants' claimed centrifuge bag, i.e., when taken in combination, the two

references do not disclose, teach, or suggest Applicants' claimed invention. Since Jorgensen *et al.* and Schlutz in combination do not disclose each and every element of the claimed invention, these two references, alone or in combination cannot be used to establish *prima facie* obviousness against Applicants' claimed invention. Applicants respectfully request withdrawal of the rejection of claims 30, 32 and 33.

CONCLUSION

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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